

CLAIM AMENDMENTS

Please amend the claims as described below. In accordance with 37 CFR §1.121, a complete listing of all claims in the application is provided below. The status of each claim is indicated in the parenthetical expression adjacent to the corresponding claim number.

Claims 1-8 (**Canceled**).

1 9. (**Currently Amended**) A microelectromechanical device comprising:
2 a substrate;
3 a mechanical structure disposed over the substrate, wherein at least a portion of the
4 mechanical structure is disposed in a chamber;
5 a fluid disposed in the chamber;
6 a periphery area disposed over the substrate, wherein the periphery area includes a
7 plurality of gaps therein, wherein the plurality of gaps is disposed in the chamber and
8 exposed to the fluid; and
9 a thin film encapsulation structure, disposed over the mechanical structure and the
10 periphery area, to partially define and seal the chamber.

1 10. (**Previously Presented**) The device of claim 9 wherein the thin film
2 encapsulation structure includes first and second encapsulation layers.

1 11. (**Previously Presented**) The device of claim 10 wherein the first encapsulation
2 layer includes polycrystalline silicon, porous polycrystalline silicon, amorphous silicon,
3 silicon carbide, silicon nitride, silicon/germanium, germanium, or gallium arsenide.

1 12. **(Previously Presented)** The device of claim 10 wherein the second
2 encapsulation layer includes polycrystalline silicon, porous polycrystalline silicon,
3 amorphous silicon, germanium, silicon/germanium, gallium arsenide, or silicon carbide.

1 13. **(Currently Amended)** The device of claim 9 wherein the mechanical structure
2 includes at least one plurality of fixed electrodes, wherein the at least one fixed electrodes
3 includes a plurality of gaps therein, wherein the plurality of gaps in the at least one fixed
4 electrode is disposed in the chamber and exposed to the fluid.

1 14. **(Currently Amended)** The device of claim 9 wherein the mechanical structure
2 includes plurality of at least one anchor regions, wherein the at least one anchor regions
3 includes a plurality of gaps therein, and wherein the plurality of gaps in the at least one
4 anchor region is disposed in the chamber and exposed to the fluid.

1 15. **(Currently Amended)** The device of claim 9 wherein the mechanical structure
2 is a resonator including at least one fixed electrode, ~~at~~ at least one anchor region, and at
3 least one moveable electrode that is physically connected to the anchor region and
4 adjacent to the fixed electrode, and wherein the at least one fixed electrode and the at
5 least one anchor region each include a plurality of gaps, and wherein the plurality of gaps
6 in the at least one fixed electrode and at least one anchor region is disposed in the
7 chamber and exposed to the fluid.

1 16. **(Currently Amended)** A microelectromechanical device comprising:

2 a substrate;
3 a mechanical structure disposed over the substrate wherein the mechanical
4 structure includes moveable and fixed electrodes;
5 a periphery area disposed over the substrate;
6 a getter area comprising a plurality of gaps, wherein the plurality of gaps is,
7 disposed in predetermined portions of the periphery area and the fixed electrodes;
8 a chamber, wherein at least a portion of the mechanical structure, ~~the periphery~~
9 ~~area~~ and the getter area are ~~at least partially~~ disposed in the chamber, and wherein the
10 getter area is exposed to fluid in the chamber; and
11 a thin film encapsulation structure, disposed over the mechanical structure, the
12 periphery area and the getter area, wherein the encapsulation structure seals the chamber.

1 17. **(Currently Amended)** The device of claim 16 wherein the getter area includes
2 gaps in portions of the periphery area and the fixed electrodes.

1 18. **(Previously Presented)** The device of claim 16 wherein the getter area is
2 capable of capturing impurities, atoms or molecules that are out-gassed from materials
3 contained within the chamber.

1 19. **(Previously Presented)** The device of claim 16 wherein the mechanical
2 structure is a resonator.

1 20. **(Previously Presented)** The device of claim 19 wherein the thin film
2 encapsulation structure includes first and second encapsulation layers.

1 21. **(Previously Presented)** The device of claim 20 wherein the first encapsulation
2 layer includes polycrystalline silicon, porous polycrystalline silicon, amorphous silicon,
3 silicon carbide, silicon nitride, silicon/germanium, germanium, or gallium arsenide.

1 22. **(Previously Presented)** The device of claim 20 wherein the second
2 encapsulation layer includes polycrystalline silicon, porous polycrystalline silicon,
3 amorphous silicon, germanium, silicon/germanium, gallium arsenide, or silicon carbide.

1 23. **(Currently Amended)** A microelectromechanical device comprising:
2 a substrate;
3 a mechanical structure disposed over the substrate, wherein at least a portion of the
4 mechanical structure is disposed in a chamber;
5 a fluid disposed in the chamber;
6 a periphery area disposed over the substrate, wherein the periphery area includes a
7 plurality of gaps, wherein the plurality of gaps is disposed in the chamber and exposed to
8 the fluid therein;
9 a thin film encapsulation structure, disposed over the mechanical structure and the
10 periphery area, to partially define and seal the chamber, wherein thin film encapsulation
11 structure includes:

12 a first encapsulation layer comprising polycrystalline silicon, porous
13 polycrystalline silicon, amorphous silicon, silicon carbide, silicon nitride,
14 silicon/germanium, germanium, or gallium arsenide; and
15 a second encapsulation layer, disposed on or over the first encapsulation
16 layer, the second encapsulation layer comprising polycrystalline silicon, porous
17 polycrystalline silicon, amorphous silicon, germanium, silicon/germanium, gallium
18 arsenide, or silicon carbide.

1 24. (Currently Amended) The device of claim 23 wherein the mechanical
2 structure includes ~~plurality of~~ at least one fixed electrodes, wherein the at least one fixed
3 electrodes includes a plurality of gaps therein, and wherein the plurality of gaps of in at
4 least one fixed electrode is disposed in the chamber and exposed to the fluid.

1 25. (Currently Amended) The device of claim 23 wherein the mechanical
2 structure includes ~~plurality of~~ at least one anchor regions, wherein the at least one anchor
3 regions includes a plurality of gaps therein, and wherein the plurality of gaps of in at least
4 one anchor region is disposed in the chamber and exposed to the fluid.

1 26. (Currently Amended) The device of claim 23 wherein the mechanical
2 structure is a resonator including at least one fixed electrode, ~~at a~~ at least one anchor region,
3 and at least one moveable electrode that is physically connected to the at least one anchor
4 region and adjacent to the at least one fixed electrode, and wherein the at least one fixed
5 electrode and the at least one anchor region each include a plurality of gaps, wherein the

6 plurality of gaps in the at least one fixed electrode and at least one anchor region is
7 disposed in the chamber and exposed to the fluid.

1 27. **(Currently Amended)** The device of claim 23 wherein the
2 microelectromechanical device further includes a getter area, disposed in predetermined
3 portions of the periphery area and ~~the~~ at least one fixed electrodes.

1 28. **(Currently Amended)** The device of claim 27 wherein the getter area includes
2 gaps in portions of the periphery area and the at least one fixed electrodes.

1 29. **(Previously Presented)** The device of claim 27 wherein the getter area is
2 capable of capturing impurities, atoms or molecules that are out-gassed from materials
3 contained within the chamber.

1 30. **(Previously Presented)** The device of claim 29 wherein the mechanical
2 structure is a resonator.

1 31. **(NEW)** The device of claim 10 wherein the first encapsulation layer includes
2 monocrystalline silicon, polycrystalline silicon, porous polycrystalline silicon, amorphous
3 silicon, silicon carbide, silicon nitride, silicon/germanium, germanium, or gallium arsenide.

1 32. **(NEW)** The device of claim 31 wherein the second encapsulation layer is a
2 semiconductor material including monocrystalline silicon, polycrystalline silicon, porous

3 polycrystalline silicon, amorphous silicon, silicon/germanium, germanium, and/or gallium
4 arsenide.

1 33. (NEW) The device of claim 20 wherein the first encapsulation layer includes
2 monocrystalline silicon, polycrystalline silicon, porous polycrystalline silicon, amorphous
3 silicon, silicon carbide, silicon nitride, silicon/germanium, germanium, or gallium arsenide.

1 34. (NEW) The device of claim 33 wherein the second encapsulation layer is a
2 semiconductor material including monocrystalline silicon, polycrystalline silicon, porous
3 polycrystalline silicon, amorphous silicon, silicon/germanium, germanium, and/or gallium
4 arsenide.

1 35. (NEW) The device of claim 23 wherein the first encapsulation layer is
2 monocrystalline silicon, polycrystalline silicon, porous polycrystalline silicon, amorphous
3 silicon, silicon/germanium, germanium, and/or gallium arsenide.

1 36. (NEW) The device of claim 35 wherein the second encapsulation layer is
2 disposed on the first encapsulation layer and is a semiconductor material including
3 monocrystalline silicon, polycrystalline silicon, porous polycrystalline silicon, amorphous
4 silicon, silicon/germanium, germanium, and/or gallium arsenide.